Prioritization and Business Case Scoring Guidelines

Introduction

The product and project prioritization and scoring process used for implementation within ITS consists of components of an overall portfolio management process. This process is illustrated in Figure 1 as a series of gates. Emphasis in this document is focused on Gate 4, which includes priority, scoring and budgets. The scoring methodology described assumes successful completion of the requirements for Gates 1-3: Product Definition, Architecture, and Business Case.
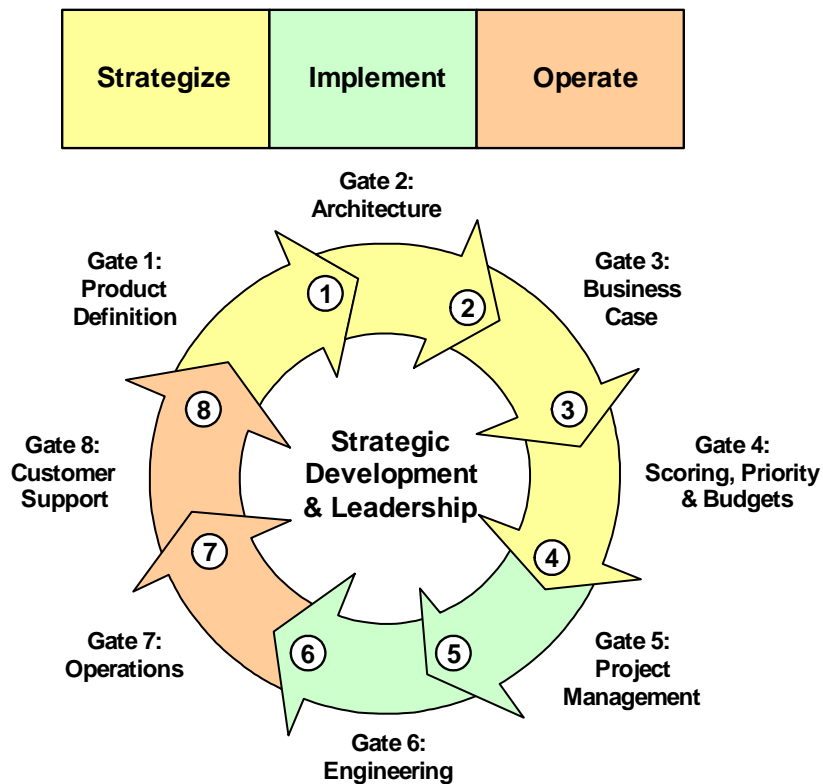

Figure 1. *ITS Portfolio Management Process*

A summary of responsibilities for Gate 4 is illustrated in Figure 2 with accompanying explanatory text dealing with roles and responsibilities.
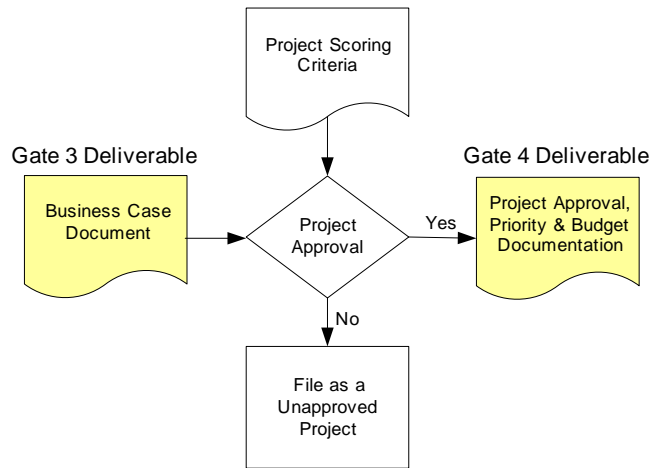
Figure 2: *Gate 4-Priority Assessment and Strategic Scoring*

- **Gate 4: Priority Assessment and Strategic Scoring (Importance and Funding)**
  Purpose: Review the PRD, CDD, and Business Case and score the proposed project and related services based upon pre-approved criteria and methods, and approve budgets. The scoring assessment summary illustrated in Appendix A will be attached to all subsequent purchase orders, RFPs, ITBs, etc.

  Suggested Documents: The project summary sheet in Appendix A is attached to the PRD, CDD, and Business Case and forms the approval documentation for the project/investment. Approved project files move to the Project Management phase represented by Gate 5.

  Responsible Manager/Groups: The PEC, with the inclusion of the Director, the Deputy Director for Business Operations, and the Chief Technologist as ex officio PEC members, form the basic team to assess priority, score projects and recommend budget allocations and suggested timelines.

  Process Touch Points: The PEC plays a critical role in determining what projects are accepted and rejected from gates one and two. The PEC is vested with responsibility to prioritize which projects are developed and in what sequence, with special attention to dependencies. The PEC can authorize cross-functional teams and allocation of resources from anywhere within ITS.

  Responsibilities: The PEC team is responsible for:
  - ✓ Establishing the priority management environment
  - ✓ Implementation and development of project scoring criteria
  - ✓ Budgetary allocation and encumbrance to projects
  - ✓ Preliminary recommendations for timeline and completions
  - ✓ Prioritizing project work
  - ✓ Determining a balance between resource capacity and demand
  - ✓ Optimizing the project portfolio for strategic and business value

Project/Investment Prioritization and Scoring

Initial project prioritization can be assessed based upon a phase one or strategic alignment assessment and score for all proposed projects. This assessment plus an assessment of budget limitations will allow for an initial prioritized list of projects/investments. Phase two scoring is dependent upon detail from project business case documentation. A preliminary prioritization matrix is suggested in Appendix B.

The ITS Product Executive Committee (PEC) is responsible for scoring and evaluating all proposed ITS projects and investments. All projects and investments are required to have varying levels of business case documentation depending upon the size of the project or investment. All business cases for projects are scored against a core set of criteria. Business case information requirements are summarized in the following decision matrix:

Business Case Section	Category	Development Costs		
		Under $50K	$50K To $999K	$1.0M And Above
1.0	**Management Summary**	●	●	●
1.A	Proposed Changes, Scope, and Objectives, "To Be"	●	●	●
1.B	Existing Situation and Problem, "As Is'	●	●	●
1.C	Proposed Technology	●	●	●
1.D	Measurements and Major Deliverables	●	●	●
1.E	Strategic Alignment (SA)	●	●	●
1.F	Program/Project Management (PM)		●	●
1.G	Project Management Schedule Summary		●	●
2.0	**Technical Summary**	●	●	●
2.A	Enterprise Architecture (EA)	●	●	●
2.B	Alternative Analysis (AA)	●	●	●
2.C	Security and Privacy (SE)		●	●
3.0	**Public Value and Benefits Summary**	●	●	●
3.A	Customer Needs Documentation (CN)		●	●
4.0	**Financial Assessment Summary**	●	●	●
4.A	Development Costs	●	●	●
4.B	Operating Costs		●	●
4.C	Lifecycle Cost Analysis (LC)		●	●
4.D	Cost Summary	●	●	●
4.E	Cost Recovery Strategy (CR)	●	●	●
4.F	Funding Timeline		●	●
4.G	Funding Source	●	●	●
5.0	**Risk Management Summary**		●	●
5.A	Risk Management Evaluation (RM)		●	●
5.A.1	Strategic			●
5.A.2	Management			●
5.A.3	Operation			●
5.A.4	Scope and Requirements			●
5.A.5	Technologies Competency			●
5.A.6	Infrastructure Dependencies			●
6.0	**CIO/Director Review**		●	●
6.A	ITS IT Plan (Listed in the submitted plan)		●	●
6.B	Project/Investment Approvals (PEC)	●	●	●
6.C	ITS Director Approvals	●	●	●
7.0	**Appendices (Attach as Needed)**			
7.A	Itemized List with Costs	●	●	●
7.B	Product Requirements Document (PRD)		●	●
7.C	Conceptual Design Document (CDD)		●	●
7.D	Gantt Chart, Project Management Summary			●

The business case is scored based upon the criteria that follow. A business case may be the strongest possible but the project/investment may still fail based on such other issues as program management, architecture and strategic alignment. Aggregate business case scoring is as follows.

Business Case (BC) (composite of all categories) Total score for Business Case

Projects scoring 5 and meeting program requirements are recommended for funding. Projects scoring a 4 and meeting program requirements, meeting most the business case requirements are recommended for funding and ITS sponsors are expected to continue improvements in the areas identified as needing work. Projects scoring 3 or below have the opportunity to improve to a 4 or degrade to a 2 rather easily. Projects scoring a 2 or below are not recommended for funding.

Score		Definition
5	41-50	Strong documented business case with excellent strategic alignment
4	31-40	Very few weak points within the BC but still need strengthening.
3	21-30	Much work remains to solidify and quantify BC. BC has the opportunity to either improve or degrade very quickly.
2	11-20	Significant gaps in the BC.
1	1-10	Inadequate in most categories of the required BC

Project Scoring Summary

Scoring Element	Score	Scoring Element	Score
Strategic Alignment (SA) (2X Weighting Factor)		Risk Management (RM)	
Phase One Point Total:		Security (SE)	
Program Management (PM)		Life Cycle Costs (LC)	
Enterprise Architecture (EA)		Customer Needs (CN)	
Alternatives Analysis (AA)			
Cost Recovery Strategy (CR)		**Phase Two Point Total:**	
Total Points		**Average Score (1-5)**	

This scoring process yields an overall score for the project/investment and a numeric value that can then be evaluated in the context of all other projects. Projects will typically be evaluated in the following portfolios with documentation as required in the decision matrix on page 3:

1) Large technology projects ($50K and Larger),
2) Small technology projects (Less than $50K),
3) Infrastructure investment projects of all sizes, and
4) Executive initiatives of all sizes.

All proposed projects are distributed to one of the four portfolio types and scored within that context. Strategies and criteria would be recommended by the PEC and approved by the Director. Total budget dollars available are identified along with projects that have been scored as approved for funding. Fundable projects that are above the line of available funding and staff resource availability are generally approved. Those below the line are not.

Scoring Criteria for Large Projects (Over $50K), Executive Sponsored Projects, and Infrastructure Projects

Phase One: Overall Prioritization and Scoring (Weighting Factor of 2X)

Strategic Alignment (SA) with PEC Approved Strategies and Criteria	
5	The project is directly tied to approved strategies and criteria.
4	The project is related to key strategies and criteria, but information tying with strategy and criteria may be incomplete.
3	The project is tied to strategies and criteria but there are substantial weaknesses for strategic alignment and criteria evaluation.
2	The project has some limited connection to approved strategies and criteria the alignment is weak.
1	There is no evidence of any connection to approved strategies and criteria.

Phase One: Prioritization Process Steps

The PEC is responsible for each of the six components of phase one evaluation for all new and ongoing projects. Projects that are continuing from prior years should be identified and reviewed for resource issues and contextual prioritization.

Step 1. Identify Key Strategies for the fiscal year.

Step 2: Assign suggested projects to Portfolio's.

Step 3: Complete phase one evaluation of all projects/investments (Strategic Alignment).

Step 4: Makes preliminary budgetary allocation (Financial Resource Availability).

Step 6: Makes preliminary assessment of staffing resource requirements.

Step 5: Produce a prioritized project/investment list based on strategic alignment and budget availability.

The deliverables for phase one evaluation consists of a:

1) Project/Investment Summary Sheet per the example in Appendix A without business case scoring or review comments, and

2) A prioritized project list of all ITS projects including those that are not represented in the IT plan.

Phase Two: Specific Business Case Scoring Items (Weighting Factor of 1X)

Program/Project Management (PM)	
5	PM is very strong and has resources in place to manage the project.
4	PM has some weak points and is working to strengthen PM.
3	Much work remains in order for PM to manage the risks for this project.
2	There is some understanding of PM for this project but it is very rudimentary.
1	There is no evidence of PM.

Enterprise Architecture (EA)	
5	This project is consistent with the State EA.
4	This project is consistent with the State EA but may have some weaknesses in alignment.
3	This project is not consistent with the State EA. The BC demonstrates an apparent lack of understanding of the EA.
2	The project has few demonstrable ties to the State EA. The BC does not recognize any needed interoperability or integration with the State EA.
1	There is no evidence of any consideration for the State EA.

Alternatives Analysis (AA)	
5	AA includes three viable alternatives, alternatives were compared consistently, and alternative chosen provides benefits and reasons.
4	AA includes three viable alternatives; however work needs to continue in terms of the alternative chosen and the accompanying analysis.
3	AA includes less than three alternatives and overall analysis needs strengthening.
2	AA includes weak AA information overall, significant weaknesses exist.
1	There is no evidence that an AA was performed.

Cost Recovery Strategy (CR)	
5	CR includes alternative cost recovery strategies with a 2 year lifecycle for products and not greater than 5 years for infrastructure investments. A recommendation for the best-cost recovery alternative is provided. The analysis is thorough and complete.
4	CR includes viable cost recovery alternatives; however work needs to continue in terms of the alternative chosen and the accompanying analysis.
3	CR includes less than three alternatives and overall analysis needs strengthening.
2	CR includes weak CR information overall, other significant weaknesses exist.
1	There is no evidence that a CR strategy was considered.

Customer Needs Documentation (CN)	
5	CN includes customer need and demand information for the targeted customer set, and key customer requirements for the product. The analysis is thorough and complete.
4	CN includes customer need and demand information; however work needs to continue in terms of key customer requirements for adopting the product, and the accompanying analysis is not complete.
3	CN includes incomplete customer needs and demand information. Key customer requirements for adopting the product are incomplete and overall analysis needs strengthening.
2	CN includes weak CN information overall, significant analysis weaknesses exist.
1	There is no evidence that any CN assessment was performed.

Risk Management (RM)	
5	Risk Assessment was performed for all mandatory elements and risk is managed throughout the project.
4	Risk assessment addresses some of the Risk, but not all that should be addressed for this project.
3	Risk Management is very weak and does not seem to address or manage most of the risk associated with the project.
2	Risk Assessment was performed at the outset of the project but does not seem to be part of the program management.
1	There is no evidence of a Risk Assessment Plan or Strategy.

Security and Privacy (SE)	
5	Security and privacy issues for the project and all questions are answered, detail is provided about the individual project throughout the life cycle to include budgeting for SE.
4	Security and privacy information for the project is provided but there are weaknesses in the information that need to be corrected.
3	Security and privacy information for the project is provided but fails to answer minimum requirements for this type of project or infrastructure investment.
2	Security and privacy information points to an overall ITS security process with little to no detail at this project level.
1	There is no security or privacy information provided for the project.

Life Cycle Costs Formulation (LC)	
5	Life Cycle costs include all of the required resources and are risk-adjusted to accommodate items addressed in the RM. Long term cost impact is well documented.
4	Life Cycle costs reflect some of the resources and some of the issues as included in the risk adjustment strategy. Long term cost impact may be incomplete.
3	Life cycle costs reflect some resources criteria but not risk adjusted. Cost impact is incomplete.
2	Life cycle costs include some resource criteria but not risk adjusted. Cost data is missing.
1	Life cycle costs do not seem to reflect a planned life cycle cost process.

Scoring Criteria for Small Projects (Under $50K) and Small Infrastructure Upgrade Projects

Project Scoring Summary

Scoring Element	Score	Scoring Element	Score
Strategic Alignment (SA) (2X Weighting Factor)		Cost Recovery Strategy (CR)	
Phase One Point Total:		Enterprise Architecture (EA)	
		Alternatives Analysis (AA)	
		Phase Two Point Total:	
Total Points:		**Average Score (1-5)**	

Score		Definition
5	19-25	Strong documented business case (BC). Overall analysis is complete.
4	12-18	Very few weak points within the BC but the analysis needs strengthening.
3	8-11	Much work remains to solidify and quantify BC. BC has the opportunity to either improve or degrade very quickly.
2	4-7	Significant gaps in the BC.
1	1-3	Inadequate in every category of the required BC

Phase Two: Business Case Scoring
The PEC is responsible for each of the five components of phase two evaluations for all new and ongoing projects. Projects that are continuing from prior years should be identified and reviewed for resource issues but need not be rescored from a business case perspective.

Step 1: Make review and scoring assignments to project review teams.

Step 2: Compile comments and scores into the Project/Investment Summary Sheet

Step 3: Approve budget and other resource requirements.

Step 4: Approve recommended timelines.

Step 5: Forward approved new projects to project management.

The deliverables for phase two evaluation consists of a:

1) Completed Project/Investment Summary Sheet per the example in Appendix A with review team comments and necessary administrative sign-offs, including.
   a. Business Case scoring,
   b. Approved project budgets and resource allocations,
   c. Approved project timelines,
2) An overall revised project prioritization list with business case scoring.

Comments: Please direct comments and suggestions on this document to:
Robert Woolley via email at bwoolley@utah.gov or phone at (801) 538-1072.

Appendix A.
Project/Investment Summary

In two pages or less supply the following information for all ongoing and new projects:

Project Name: (Identify the name by which the project is designated on all project and financial documents)

Project Portfolio Type: (State category)   **Project Type:** (New/Ongoing)

Project Sponsor(s): (Identify the principal ITS sponsors of the project/investment and any external agency sponsors)

Project Duration: (Include start date and expected completion date)

Summary of Project/Investment Request: (Insert a description of the project and associated public benefits in 500 words or less. Quantify benefits whenever possible.)

Budget and Funding Summary: (Identify expenditures over the next three fiscal years)

Budget Category	FY1	FY2	FY3
ITS Personnel Cost Estimates			
Hardware Capital Expenditures (Over $5K)			
Hardware Expenditures (Under $5K)			
Software Capital Expenditures (Over $5K)			
Software Expenditures (Under $5K)			
Operating Expenditures (Current Expense)			
Contract and Consulting Services			
Travel and Training Expenditures			
Other Expenses			
Total Project/Investment Expenditures			

Project Scores:

Scoring Element	Score	Scoring Element	Score
Strategic Alignment (SA) (2X Weighting Factor)		Risk Management (RM)	
Phase One Point Total:		Security (SE)	
Program Management (PM)		Life Cycle Costs (LC)	
Enterprise Architecture (EA)		Customer Needs (CN)	
Alternatives Analysis (AA)			
Cost Recovery Strategy (CR)		**Phase Two Point Total:**	
Total Points		**Average Score (1-5)**	

Reviewer Comments: (Comments from external staff asked to review the project/investment)
  Strengths:

  Weaknesses:

PEC Approval Date:

Director Approval _____ **Date:**

Executive Director Approval _____ **Date:**

FY04 IT Plan Projects

Phase 1 Score	Portfolio Type	PROJECT DESCRIPTION	DP Current Hardware Software (Under 5,000)	Capital Expense Hardware Software (Over 5,000)	Contract Services	Other Expense	Total Project Expense
	I	Host Based IDS	$ -	$ 112,500	$ -	$ -	$ 112,500
	I	Acceptence Test Servers	$ -	$ 60,000	$ -	$ -	$ 60,000
	I	Voice Processing Systems/IP Media (No. G9AQ)	$ 145,000	$ 400,000	$ 500,000	$ -	$ 1,045,000
	I	Oracle 9i Clustering	$ -	$ 120,000	$ -	$ -	$ 120,000
	I	Backup Infrastructure	$ -	$ 200,000	$ -	$ -	$ 200,000
	I	Disk Storage Alternatives	$ -	$ 200,000	$ -	$ -	$ 200,000
	I	UMD - GroupWise Integration	$ -	$ 50,000	$ -	$ -	$ 50,000
	I	PBX and Key Systems	$ 320,000	$ 540,000	$ 800,000	$ -	$ 1,660,000
	I	Microwave Site Improvements	$ -	$ 253,000	$ -	$ -	$ 253,000
	I	WAN - Access Upgrades (Remote Routers and switches)	$ 725,000	$ 575,000	$ 24,000	$ 160,000	$ 1,484,000
	I	WAN - Distribution Upgrades	$ 485,000	$ 760,500	$ 624,500	$ 159,000	$ 2,029,000
	I	WAN - Geographic Hub Upgrades	$ 67,000	$ 242,000	$ 25,000	$ 39,400	$ 373,400
	I	Air Conditioner Replacement UPS Room	$ -	$ 59,000	$ -	$ -	$ 59,000
	I	Radio Shop Service Monitors	$ -	$ 50,000	$ -	$ -	$ 50,000
	L	Vulnerability Assessment - Phase I / II	$ -	$ 50,000	$ -	$ -	$ 50,000
	L	Salt Lake Center File Server Purchase	$ -	$ 82,681	$ -	$ -	$ 82,681
	L	Authentication Software and Licensing	$ -	$ 100,000	$ -	$ -	$ 100,000
	L	Netcool - Development Enviroment	$ -	$ 81,896	$ -	$ -	$ 81,896
	L	Netcool - Failover Environment	$ -	$ 81,896	$ -	$ -	$ 81,896
	L	Salt Lake and Richfield Server Redundancy	$ -	$ 100,000	$ -	$ -	$ 100,000
	L	Oracle Licenses for Linux Environment	$ -	$ 60,000	$ -	$ -	$ 60,000
	L	Asset Management	$ -	$ 650,000	$ -	$ -	$ 650,000
	L	Better Billing	$ -	$ 500,000	$ -	$ -	$ 500,000
	L	Linux Lab	$ -	$ 50,000	$ -	$ -	$ 50,000
	L	Licenses for Alternative Reporting Software	$ -	$ 50,000	$ -	$ -	$ 50,000
	S	Ogden Regional Center File Server Replacement	$ 5,500	$ 16,215	$ 2,000	$ -	$ 23,715
	S	Provo Regional Center Airconditioning replacement	$ -	$ 35,000	$ -	$ -	$ 35,000
	S	Provo Regional Center File Server Replacement	$ 5,000	$ 16,215	$ 2,000	$ -	$ 23,215
	S	VMS - Firewall Management	$ -	$ 13,000	$ -	$ -	$ 13,000
	S	Development Servers	$ -	$ 20,000	$ -	$ -	$ 20,000
	S	DSL Broadband Telecommuting	$ -	$ 40,000	$ -	$ -	$ 40,000
	S	Salt Lake Center CITRIX Software Purchase	$ -	$ 22,230	$ -	$ -	$ 22,230
	S	Oracle Tuning Tools	$ -	$ 20,000	$ -	$ -	$ 20,000
	SI	Network IDS	$ -	$ 10,000	$ -	$ -	$ 10,000
	SI	RADIUS	$ -	$ 13,000	$ -	$ -	$ 13,000
	SI	Secure Mainframe Transfer (HIPAA)	$ -	$ 30,000	$ -	$ -	$ 30,000
	SI	Vulnerability Appliance and Tools	$ -	$ 15,000	$ -	$ -	$ 15,000
	SI	Radio Shop Service Monitors	$ -	$ 25,000	$ -	$ -	$ 25,000
	SI	Site Maintenance Shed	$ -	$ 7,500	$ -	$ -	$ 7,500
	SI	Salt Lake Center Printer Replacement	$ -	$ 21,000	$ -	$ -	$ 21,000
		Subtotals FY 2004	$ 1,752,500	$ 5,732,633	$ 1,977,500	$ 358,400	$ 9,821,033
		Approved Legislative Capital Budget 2004		$ 5,732,800			
		Unallocated FY04 Variance		$ 167			
		FY04 Analysis by Project Type					
		Large Projects (Over 50K)	$ 1,806,473	18.4%			
		Large Infrastructure Projects (Over 50K)	$ 7,695,900	78.4%			
		Small Projects (Under 50K)	$ 197,160	2.0%			
		Small Infrastructure Projects	$ 121,500	1.2%			
		Executive Sponsored Projects	$ -	0.0%			
		FY03 Capital Carryover Summary as of 7/1/03					
		FY2003 Carryover Approved by the Legislature		$ 4,473,000			
		Misc Balances from completed Carryover Projects		$ 47,717			
	E	VoIP Pilot Projects		$ 250,000			
	I	Utah Master Directory Phase 2		$ 131,000			
	I	Richfield Mainframe Business Resumption Expansion		$ 378,000			
	I	Richfied Communications Upgrade		$ 500,000			
	I	Switching Upgrades for Business Resumption		$ 300,000			
	I	High Availability UNIX Servers for Richfield		$ 400,000			

All ongoing and approved projects need to be included and reviewed to allow accurate prioritization and allocation of resources/personnel. Projects that are potential projects but not part of the agency ITS plan should also be listed and put through phase one scoring, and preliminary cost assessment.

For a project have a high priority it must be strategically aligned and have funding and personnel resources sufficient to complete the project. Executive sponsorship is a principal driver for strategic alignment, and will impact priority in phase one evaluation. Business case evaluation criteria remain on an equal footing for all projects.